4-29-2008

Clinical Guidelines for Diagnosis and Management of Asthma

Maine Department of Health and Human Services

Maine Center for Disease Control and Prevention

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An Office of the Department of Health and Human Services
John E. Baldacci, Governor — Brenda M. Harvey, Commissioner

Asthma Management for Children and Adults

State of Maine
Asthma Prevention
and Control Program

Consider the diagnosis of "asthma" if:

1. ***RECURRENT*** coughing, wheezing, or shortness of breath relieved by a bronchodilator
2. Objective response by spirometry (≥12% increase of FEV_1 post bronchodilator)
3. Rule out conditions such as aspiration, GERD, airway anomaly, foreign body, cystic fibrosis, vocal cord dysfunction, or COPD. GERD is a common co-morbidity. (If diagnosis in doubt, consult with an asthma specialist.)

Assess Asthma Severity: Persistent vs. Intermittent

Persistent Asthma

1. Symptoms >2 days per week ***OR***
2. Awaken at night from asthma >2X per month ***OR***
3. Limitation of activities, despite pretreatment for exercise induced asthma ***OR***
4. More than 2 steroid bursts in 1 year ***OR***
5. FEV_1 <80% predicted ***OR*** low FEV_1/FVC ratio (see below)
6. For children <4 years consider "persistent" if more than 4 episodes of wheezing in a year ***AND*** parental history of asthma or eczema or wheezing between illnesses.

Treatment for Persistent Asthma: Daily Inhaled Corticosteroids

(steps 2, 3 or higher)

Assess Response within 2-6 weeks

"Well Controlled" Asthma

1. Daytime symptoms <2 days per week ***AND***
2. Awakening at night from asthma <2X per month ***AND***
3. No limitation of activities ***AND***
4. Less than 2 steroid bursts per year
5. FEV_1 ≥ 80% predicted
6. FEV_1/FVC →

FEV_1/FVC:
5-19 yrs ≥ 85%
20-39 yrs ≥ 80%
40-59 yrs ≥ 75%
60-80 yrs ≥ 70%

YES

Follow the **Stepwise Approach Guideline** and consider *step down* if well controlled for 3 consecutive months. Then **re-assess every 3 to 6 months.**

NO

Follow the **Stepwise Approach Guideline** and *step up* until well controlled is achieved. **Re-assess in 2 to 6 weeks.**

Quick Tips for All Patients with Asthma

- ❑ **Environmental Control**: identify and avoid triggers such as tobacco smoke, pollens, molds, animal dander, cockroaches, and dust mites.
- ❑ **Flu Vaccine**: recommend annually.
- ❑ **Spirometry**: at diagnosis and at least annually.
- ❑ **Asthma Score**: use tools such as ACQ®, ACT™ or ATAQ© to assess asthma control.
- ❑ **Asthma Education**: review correct inhaled medication device technique every visit, if needed.
- ❑ **Asthma Action Plan**: at diagnosis; review and update at each visit.
- ❑ **Short-Acting Beta-Agonist** ***(e.g., albuterol)***: 1) for quick relief every 4-6 hours as needed (see step 1), 2) pretreat with 2 puffs for exercise-induced bronchospasm 10-60 minutes before exercise.
- ❑ **Oral Corticosteroids**: consider for acute exacerbation.
- ❑ **Spacer with Valve**: if spacer selected, use spacer with valve.
- ❑ **Mask**: use with spacer with valve and with nebulizer for children <5 years and anyone unable to use correct mouthpiece technique.

See www.coloradoguidelines.org for additional asthma management resources.

Consider referral to a specialist if not well controlled within 3-6 months using stepwise approach ***OR*** 2 or more ED visits or hospitalizations for asthma in a year.

Adapted from the NAEPP 3: http://www.nhlbi.nih.gov/guidelines/asthma/. This guideline is designed to assist the clinician in the management of asthma. This guideline is not intended to replace the clinician's judgment or establish a protocol for all patients with a particular condition. For references, additional copies of the guideline, or patient documents go to www.coloradoguidelines.org or call (720) 297-1681 or 866-401-2092. This publication was supported by cooperative agreement #2U59EH824177-04 Revised, from the Centers for Disease Control and Prevention (CDC). Its contents are solely the responsibility of the authors and do not necessarily represent the official views of CDC. This Guideline was originally developed by Colorado Clinical Guidelines Collaborative.

Revised 04/29/08

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Asthma Stepwise Approach

State of Maine Asthma Prevention and Control Program

Intermittent Asthma

Persistent Asthma: Daily Medication

Step up as indicated although address possible poor adherence to medication. Re-assess in 2 to 6 weeks.

Step down if well controlled and re-assess in 3 months. If very stable then assess control every 3 to 6 months.

All LABAs and combination agents containing LABAs have a black box warning.

Step 1 *(all ages)*

Short-acting beta-agonist (e.g., albuterol prn)

If used more than 2 days per week (other than for exercise) consider inadequate control and the need to step up treatment.

Step 2

All Ages

Preferred:
Low-dose inhaled steroid

Alternative:
Leukotriene blocker or cromolyn

Age 0-4 yrs

Consider referral (especially if diagnosis is in doubt)

Step 3

Age 12+ yrs

Preferred:
Low-dose inhaled steroid + long-acting beta-agonist or Medium-dose inhaled steroid

Alternative:
Low-dose inhaled steroid + leukotriene blocker

Age 5-11 yrs

Low-dose inhaled steroid + long-acting beta-agonist or leukotriene blocker or Medium-dose inhaled steroid

Age 0-4 yrs

Medium-dose inhaled steroid + referral

Step 4

Age 12+ yrs

Preferred:
Medium-dose inhaled steroid + long-acting beta agonist

Alternative:
Medium-dose inhaled steroid + leukotriene blocker

Age 5-11 yrs

Same as 12+ yrs

Age 0-4 yrs

Medium-dose inhaled steroid
+
either long-acting beta-agonist or leukotriene blocker

Step 5

Age 12+ yrs

High-dose inhaled steroid + long-acting beta-agonist
-and-
Consider omaluzimab if allergies

Age 5-11 yrs

Preferred:
High-dose inhaled steroid + long-acting beta-agonist

Alternative:
High-dose inhaled steroid + leukotriene blocker

Age 0-4 yrs

High-dose inhaled steroid
+
either long-acting beta-agonist or leukotriene blocker

Step 6

Age 12+ yrs

High-dose inhaled steroid + long-acting beta-agonist + oral steroid
-and-
Consider omaluzimab if allergies

Age 5-11 yrs

Preferred:
High-dose inhaled steroid + long-acting beta-agonist

Alternative:
High-dose inhaled steroid + leukotriene blocker
+
oral steroid

Age 0-4 yrs

High-dose inhaled steroid
+
either long-acting beta-agonist or leukotriene blocker
+
oral steroid

All ages Steps 4 through 6: Consult with asthma specialist

Consider immunotherapy if allergic asthma

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